

## CLAIMS

1. A porous fiber comprising a hydrophobic solvent-soluble polymer and an organic compound having a plurality of hydroxyl groups, and having  
5 an average fiber diameter of 0.1-20  $\mu$  m and a void percentage of at least 5%.

2. The porous fiber according to Claim 1, wherein the hydrophobic solvent is a halogen element-containing hydrocarbon.

3. The porous fiber according to Claim 2, wherein the halogen element-containing hydrocarbon is selected from the group consisting of  
10 methylene chloride, chloroform, dichloroethane, tetrachloroethane, trichloroethane, dibromomethane, and bromoform.

4. The porous fiber according to Claim 1, wherein the hydrophobic solvent-soluble polymer is selected from the group consisting of polylactic acid, polycaprolactone, polycarbonates, polystyrene, and polyarylates.

15 5. The porous fiber according to Claim 1, wherein the number-average molecular weight of the organic compound having a plurality of hydroxyl groups is not less than 62 nor more than 300.

6. A fiber structure comprising porous fibers that comprise a hydrophobic solvent-soluble polymer and an organic compound having a  
20 plurality of hydroxyl groups, and have an average fiber diameter of 0.1-20  $\mu$  m and a void percentage of at least 5%.

7. The fiber structure according to Claim 6, wherein the hydrophobic solvent is a halogen element-containing hydrocarbon.

8. The fiber structure according to Claim 7, wherein the halogen  
25 element-containing hydrocarbon is selected from the group consisting of methylene chloride, chloroform, dichloroethane, tetrachloroethane, trichloroethane, dibromomethane, and bromoform.

9. The fiber structure according to Claim 6, wherein the number-average molecular weight of the organic compound having a plurality  
30 of hydroxyl groups is not less than 62 nor more than 300.

10. The fiber structure according to Claim 6, wherein the hydrophobic solvent-soluble polymer is selected from the group consisting of polylactic acid, polycaprolactone, polycarbonates, polystyrene, and polyarylates.

35 11. A method for producing a fiber structure comprising porous

fibers that have an average fiber diameter of 0.1-20  $\mu$  m and a void percentage of at least 5%, including a step in which a solution is produced by dissolving a hydrophobic solvent-soluble polymer and an organic compound having a plurality of hydroxyl groups in a hydrophobic solvent, a step in  
5 which the solution is spun by electrospinning, and a step in which a fiber structure accumulated on a collector is obtained.

12. The method for producing the fiber structure according to Claim 11, wherein the hydrophobic solvent is a halogen element-containing hydrocarbon.

10 13. The method for producing the fiber structure according to Claim 12, wherein the halogen element-containing hydrocarbon is selected from the group consisting of methylene chloride, chloroform, dichloroethane, tetrachloroethane, trichloroethane, dibromomethane, and bromoform.